

**Shandon  
Tissue  
Processors**



**Shandon Excelsior™**

**Shandon Pathcentre®**

**Shandon Citadel®**

**Shandon TissueWave™**

**Tissue Processing  
Consumables**

# Shandon Excelsior™ ES Tissue Processor

Sophistication meets simplicity.



The new Shandon Excelsior ES Tissue Processor continues the Thermo Electron Corporation tradition of offering one of the most advanced, traditional reagent instruments available today.

That's why the Shandon Excelsior ES remains the instrument of choice for laboratories throughout the world who have used the proven technology to meet their most challenging tissue processing applications time after time .

With the new Shandon Excelsior ES, all of the innovative features that you have come to expect from the Shandon Excelsior are combined with new, redesigned software in a more simplified format. It makes operation easy for anyone from the first-time user to the senior laboratory technician.

With the built-in benefits of a more robust reagent cabinet, easy-view wax baths, safety, ease of use, increased productivity, and proven reagent cost savings, the Shandon Excelsior ES continues to set the standard of quality and provide consistent results for the user.

## Better Software for Better Results.

- Daily Operations Mode – an easy-to-use operating mode for routine operation of the Shandon Excelsior ES.
- Daily operators may select and start a processing run or a flush cycle with one key press.
- When needed, the Menu Mode delivers all the functionality that the Shandon Excelsior ES has to offer.
- The Quality Control screen will allow the daily user to acknowledge or postpone rotation requests; approved users may also change set limits from the Menu mode.
- Access to the Menu Mode functions may be user-protected to prevent inexperienced users from changing programs or setup parameters.
- Wax bath levels may be easily viewed by simply opening the cabinet doors.



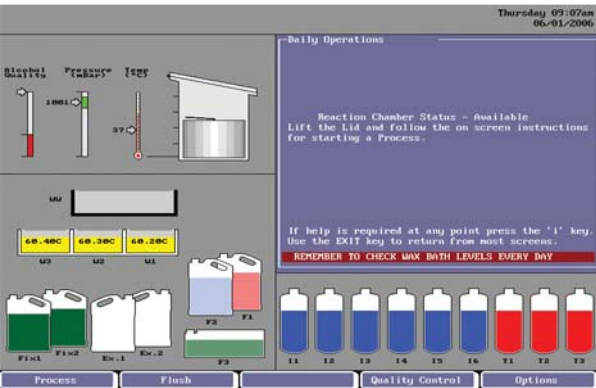
Easy-view wax baths.



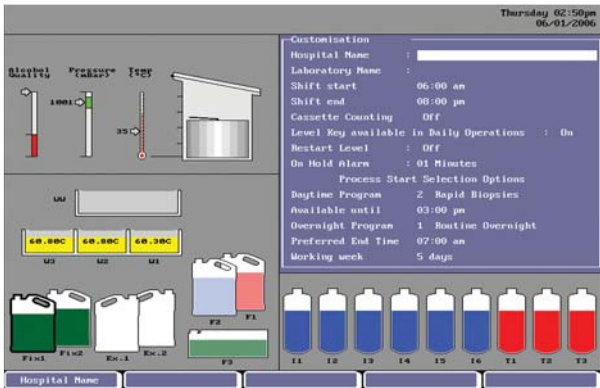
Microwavable baskets.

## New screen displays illustrate the simplicity of the new Shandon Excelsior™ ES.

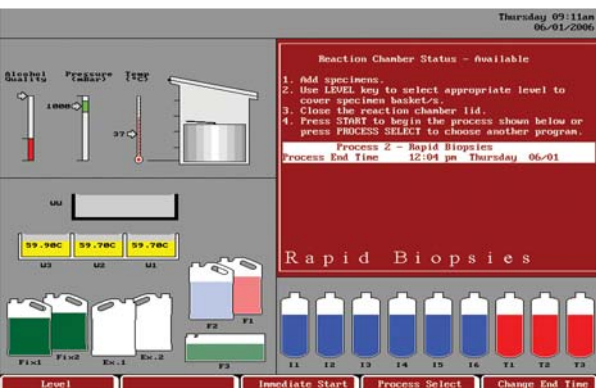
- Intuitive, easy-to-learn screens.
- Automated reagent management.
- Push-button functions for ease of daily operation.
- Simplified layout.
- Simplified QC functions.



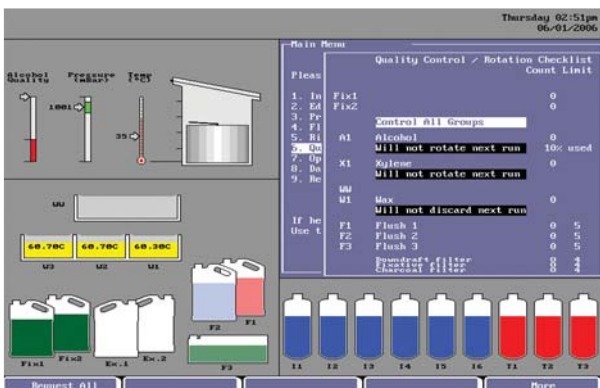
Daily Operations Screen.



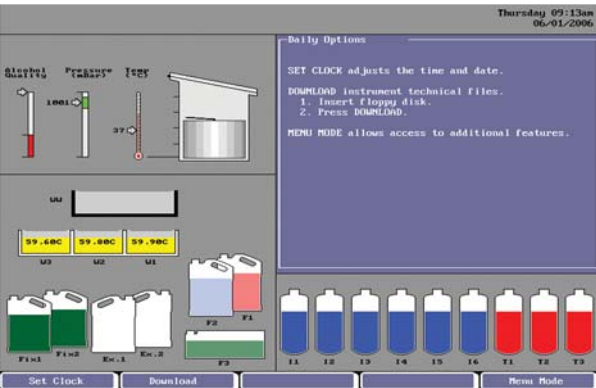
Customization Screen from Menu Mode.



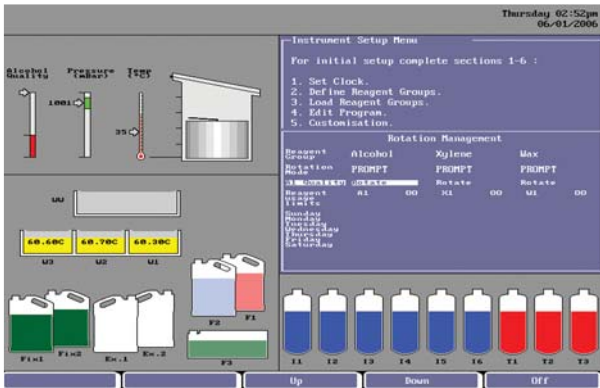
Start Screen.



Quality Control Screen featuring "Control All Groups" Function.



Daily Options Screen.



Rotation Management Screen.



Proven Features of the Shandon Excelsior™ ES.

Safety.

- **Built-in Downdraft Ventilation** which minimizes the operators’ exposure to hazardous vapors.
- **Reagent storage cabinet** is built to enhance safety and is vented through 2 additional filters for further fume control.
- Specimen safety and protection is accomplished by **battery back-up**.
- **2 remote alarms** alert the user to possible problems.
- **Automatic underfill recovery** finishes processing in the safest environment possible.



Interior of reagent storage cabinet.

Ease of use.

- **Automatic in-process reagent rotation.**
- **Easy-to-read screens** with colorful graphics.
- **Easy programming** and operation.
- **User-friendly software** is like having an electronic user’s manual at your fingertips.
- **International icons** alert operators to anything that needs attention.



Filters

Reagent Cost Savings.

- **Unique reagent monitoring** and management system.
- **Reagent quality of the first alcohol** is measured using specific gravity and alerts operator when replacement is necessary.

Increased Productivity.

- **Systematic logging and reporting** of quality control data, event records and program information.
- **Reagent preheating option** allows for more consistent processing and rapid biopsy runs.
- **Three distinct fill levels** in the chamber to shorten processing times.
- **Organized and random baskets** are microwavable and designed to be used in conjunction with microwave pre-fixation (see page 10 for details about the new Shandon TissueWave™ Microwave Tissue Processing System).



Downdraft Extraction Duct Adapter Kit

Quality of Results.

- **Circular design** allows greater temperature uniformity.
- **Continuous agitation** circulates reagents freely around specimens.
- Organized basket is designed for **maximum reagent infiltration** around specimens by preventing cassette bunching.

Other features of the

Shandon Excelsior ES include:

- **Organized basket** to process 222 cassettes and **random basket** to process up to 300 cassettes.\*
- **Sloped lid design** allows excess condensation removal during processing; **Glass lid** allows viewing during processing.
- **10 customized programs** and **5 flush options.**
- **3 wax baths.**
- **Multilingual.**
- **7 password protected areas.**
- **Remote Monitoring / Diagnostics** through Shandon Netmon Service (see page 9).

\*When using 5.0 L reagent bottles. Refer to Application Note “Shandon Excelsior Random Basket - 300 Cassettes.”

Battery Back-up.

When the power fails, the Shandon Excelsior doesn’t.. The Shandon Excelsior has a specially designed, built-in power management system that continually monitors the input power. In the event of any type of power interruption or fluctuation, the system will safely continue processing tissue for up to four hours running on battery power. Once the normal power is restored, the Shandon Excelsior will recharge so that it is ready for the next power interruption, whenever it might occur.

Shandon Excelsior Icons

A brief description of the icons.



Alerts you to **Demonstration Mode**.



Alerts you to a tripped **Over Temperature Breaker**.



Alerts you that the **Security Code Protection** is unlocked.



Alerts you that **storage cabinet** is open.



Alerts you that the **Battery Back-up** is not ON.



Alerts you to a **Quality issue**.



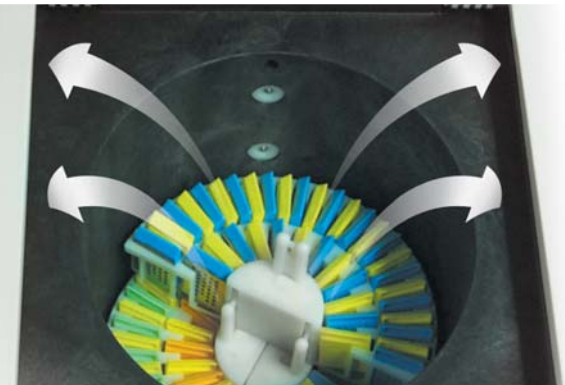
Alerts you to a condition that **requires attention**.



Alerts you of **activation** of your two **Remote Alarms**.



Alerts you of **activation** of a **Netmon connection**.



Downdraft fume control.

Shandon Excelsior™ ES Specifications

Description	Order Number
Shandon Excelsior ES	110-240V, 50/60 Hz, 1 Ph A78400006

Physical Specifications

Dimensions (H x W x D)
63" x 26.5" x 20.5" (160 x 67 x 52 cm)
Weight
246.5 lbs. (112 kg)
Power Requirements
950VA (maximum); 200VA (typical)

Included with Product*	Order Number
Formaldehyde (Potassium Permanganate) Filter - Each	9990612
Vapor Filter (Charcoal) - Each	9990610
Organized Basket - 6 Supplied	A78410025
Random Basket	A78410021
Basket Lid (Organized and Random)	A78420056
Large Block Metal Divider (for Random Basket)	A78430198
Water Flush Bottle + Cap	A78420039
Storage Bottles - 5 Liter (2 supplied)	See Below
Waste Wax Drawer Assembly - 2 Drawers, 2 Lids, 1 Cover	See Below
Monitor	A78410091
Operator Guide (Specify Language)	A78410120
Service Record Book	A78410106
Spatula	P09046
Wax Fill Chute	A78430265
Wax Waste Liners - 20 / Pk.	AP14747
Wrench / Spanner, 19mm A / F	A78430308
Screen Information Card	A784-1013

\*Contents, Packaging, and Quantities of items listed under “Included with Product” are subject to change without prior notice.

Available Accessories	Order Number
Formaldehyde (Potassium Permanganate) Filter - 6 / Pk.	B9990612CS
Vapor Filter (Charcoal) - 6 / Pk.	7411258
Service Manual	A78410101
Waste Wax Drawer Kit - 1 Drawer, 1 Lid	A78410027
Plastic Basket Carrying Container, 2.6 Qt. / 2.5 L	B35210007
Storage Bottles - 5 Liter - 6 / Pk.	A78410026
Downdraft Extraction Duct Adapter Kit	A78410023
Main Air System Duct Adapter Kit	A78410024
Monitor Clamp Kit	A78410029
Shandon Excelsior ES Gold Service Plan (see page 16)	A78400006C
Shandon Excelsior ES Bronze Service Plan (see page 16)	A78400006PM

Agency Approvals

Designed to meet IEC 61010, CSA, UL, and CE Mark (IVDD compliant).

# Shandon Pathcentre® Tissue Processor

## Enclosed tissue processor.

The Shandon Pathcentre is a high-volume, totally enclosed tissue processor that allows complete user control and excellent continuous reagent agitation.



The practical design of the Shandon Pathcentre provides a 306-cassette capacity basket plus the ability to add up to three extra processing modules for high throughput laboratories. The Shandon Pathcentre's "Closed Loop System" ensures that fumes stay within the system and do not escape into your lab. A gentle counter-stir agitation and tidal flow system combine to promote maximum fluid penetration through baskets and cassettes for excellent processing quality and consistency. A circular reaction chamber optimizes temperature uniformity, and enhances continuous agitation.

The Shandon Pathcentre is also designed to allow flexible, real-time programming for up to 9 processing programs. Simple multi-lingual programming is displayed on a back-lit LCD monitor that displays commands in English, French, Spanish, German, Italian or Swedish with full on-screen prompt graphics. A user can

### Practical Design.

- **Up to 306-cassette capacity** plus the ability to add up to three extra processing modules for high throughput laboratories.
- **Totally enclosed.** Fumes stay within the system, and do not escape into your lab.
- **Gentle counter-stir agitation** and Shandon tidal flow system promotes maximum fluid penetration through baskets and cassettes for the ultimate in processing quality and consistency.
- **4 wax baths** provide excellent specimen infiltration.
- **Circular reaction chamber** optimizes temperature uniformity.
- **Glass reaction chamber lid** allows visual inspection of processing.
- **Lid automatically locks** during processing.
- **Sealed reaction chamber lid** is easily opened with one hand.
- **Plug-in reagent bottles** have color-coded labels and are engineered for ease of use.

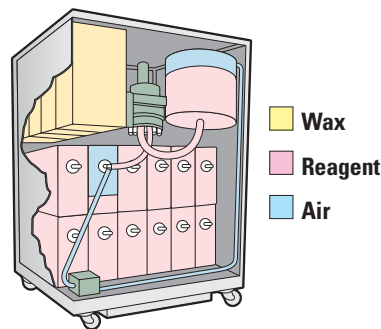
decide between selectable processing parameters including heat, vacuum / pressure, immersion time, drain time, and agitation. A built-in clock enables selection of immediate-start or delayed-start functions for overnight, weekend, and holiday periods.

Quality control indicators automatically alert you when to change reagents and perform maintenance/service procedures.



### Flexible Programming.

- **Simple multi-lingual programming** with full on-screen prompt graphics.
- **Back-lit LCD monitor** displays commands in English, French, Spanish, German, Italian or Swedish.
- **User selectable processing parameters** include heat, vacuum / pressure, immersion time, drain time and agitation.
- **Stores 9 processing programs** for each module.
- **Wide reagent compatibility** includes acetone and chloroform.
- **Delayed start** can be programmed in any reagent position. Options for heat, vacuum / pressure, and agitation can be changed during delayed time.
- **Real time programming** with built-in clock and delayed start facility for overnight, weekend, and holiday periods. It can be programmed up to 7 days in advance.
- **Multilevel pass-code security** protects instrument from unauthorized access.



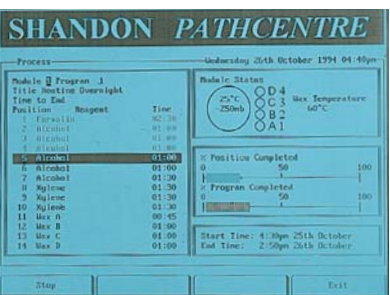
The Shandon Pathcentre's "Closed Loop System" captures fumes from reagents inside the instrument.

### Specimen Safety.

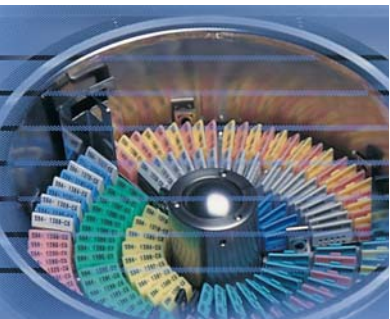
- **Automatic underfill recovery system** protects your specimens by automatically rerouting reagents and completing processing.
- **Independent, selectable flushes** – either standard flush or extended flush.
- **Water rinse option** can be selected at the end of flush.
- **Audible and remote alarm signals** are standard.
- **Hard copy print-out of records** including programs, processing routines and real-time events is available when connected to a parallel 80-column printer.

### Quality Control

- **Automatic alerts** when it is time for routine maintenance and service or to change reagents.



On-screen graphics guide the user through program commands. The screen displays the current status of the procedure.



In the state-of-the-art reaction chamber, reagent circulates freely around specimens.

### Shandon Pathcentre® Specifications

Description	Order Number
Shandon Pathcentre Random Basket 110-120V, 50/60Hz	75200012
Shandon Pathcentre Random Basket 220-240V, 50/60Hz	75200011
Shandon Pathcentre Organized Basket 110-120V, 50/60Hz	75200014
Shandon Pathcentre Organized Basket 220-240V, 50/60Hz	75200013
Extension Unit Random Basket 110-120V, 50/60Hz	75200112
Extension Unit Random Basket 220-240V, 50/60Hz	75200111
Extension Unit Organized Basket 110-120V, 50/60Hz	75200114
Extension Unit Organized Basket 220-240V, 50/60Hz	75200113

### Physical Specifications

#### Dimensions (H x W x D)

52" x 22" x 25" (132 x 56 x 33 cm)

#### Weight

353 lbs. (160 kg)

#### Power Requirements

1200VA

### Included with Product\*

Included with Product*	Order Number
Wax Drain Container	75210147
Reagent Storage Bottles (12 included with unit)	See Below
Reagent Bottle Labels	75210152
Charcoal Filter	66110056
Tissue Basket Handle	75220419
Viton Lid Seal	75230681
Cassette Basket	See Below
Reagent Bottle Pour Spout	P13433
Spatula	P09046
Wax Drain Key	P12648
Operator Manual (Specify Language)	75210150
Quick-Reference Cards	A752-1017
Service Record Book	A78410106

\* Contents, Packaging, and Quantities of items listed under "Included with Product" are subject to change without prior notice.

### Available Accessories

Available Accessories	Order Number
Large Block Basket (1 Segment)	75210166
Random Cassette Basket (1 Segment)	75210165
Organized Cassette Basket (1 Segment)	A75210192

**Note:** The Pathcentre reaction chamber holds three basket segments. Organized, random or large block baskets may be used in combination.

Reagent Storage Bottles - 3 / Pk.	A75210193
Airbag - 4 / Pk.	66110048
Reaction Chamber Drain Filter - 2 / Pk.	75210168
Wax Chamber Seal - 4 / Pk.	75210149
Wax Disposal Bag - 10 / Pk.	75210161
Displacement Block (Organized Basket Only)	A75210197
Service Manual	75210151
Printer	1241180
Printer Cable	1931002
Bottle Connector Seals - 3 / Pk.	75210148
Reagent Bottle Caps - 3 / Pk.	A75210194
PTFE Lid Seal	75210157
Shandon Pathcentre Gold Service Plan (see page 16)	7523102
Shandon Pathcentre Bronze Service Plan (see page 16)	7523102PM

### Agency Approvals

Designed to meet IEC 61010, CSA, UL, and CE Mark (IVDD compliant).



# Shandon Citadel® Tissue Processor

Carousel-type tissue processor



Order vacuum unit separately.

- **The Citadel 2000** has a 110-cassette capacity, and the **Citadel 1000** has a capacity of 60 cassettes (with organized baskets).
- **Reagent stations are easily removed** from the unit for replenishing.
- **Delayed-start feature** may be programmed up to 9 days in advance.
- **Hand-held touch key controller** is simple to use.
- **Store up to 4 complete programs** in the Citadel's memory.
- **Program immersion time** during each step.
- **Loading station** protects tissue baskets from air as the baskets are raised.
- **User is protected** from open containers.
- **The unit fits in most standard fume hoods**, as well as the Shandon Hyperclean™ 2 Work Station (see page 132).
- **Optional vacuum unit** facilitates efficient and rapid wax infiltration of specimens.
- **Has 10 reagent containers and 2 wax baths.**
- **Random and organized baskets available.**
- **Tissue baskets load and unload easily** with hanger clips in the unit's hood.

## Shandon Citadel™ Specifications

Description	Order Number	
Shandon Citadel 1000	220-240V, 50/60Hz	69800001
Shandon Citadel 1000	220-240V, 50/60Hz GER	69800002
Shandon Citadel 1000	110-120V, 50/60Hz USA	69800003
Shandon Citadel 2000	220-240V, 50/60Hz	69800004
Shandon Citadel 2000	220-240V, 50/60Hz GER	69800005
Shandon Citadel 2000	110-120V, 50/60Hz USA	69800006
Shandon Citadel 2000	220-240V, 50/60Hz EUR	69800007
Shandon Citadel 1000	220-240V, 50/60Hz EUR	69800008

## Physical Specifications

### Dimensions

**Citadel:** Diameter: 27.2" x Height: 25" (68 x 62.5 cm)  
**Vacuum Unit:** 7.7" H x 10.2" W x 13.4" D (19.5 x 26 x 34 cm)

### Weight (Citadel Only)

115 lbs. (52 kg)

### Power Requirements (Citadel Only)

500VA

## Included with Product\*

Order Number	
<b>Citadel 2000</b>	
Organized Basket	69810030
Random Basket	69810035
Basket Hanger (2L)	69810037
Basket Lid	69810031
Wax Baths 110V	69810053
Wax Baths 240V	69810051
Reagent Container (Polypropylene)	69810018
Reagent Container (Stainless Steel)	69810131
Shandon Citadel Operator Manual (Specify Language)	69810040
Service Record Book	A78410106
<b>Citadel 1000</b>	
Organized Basket	69810029
Random Basket	69810034
Basket Hanger (1L)	69810036
Basket Lid	69810031
Wax Baths 110V	69810052
Wax Baths 240V	69810050
Reagent Container (Polypropylene)	69810019
Reagent Container (Stainless Steel)	69810130
Shandon Citadel Operator Manual (Specify Language)	69810040
Service Record Book	A78410106

\* Contents, Packaging, and Quantities of items listed under "Included with Product" are subject to change without prior notice.

## Available Accessories

Order Number	
Vacuum Units for Shandon Citadel	110-120V 69810025
Vacuum Units for Shandon Citadel	220-240V UK 3-Pin 69810024
Vacuum Units for Shandon Citadel	220-240V EUR 2-Pin A69810054
10 Cassette Organized Basket	69820125
25 Cassette Organized Basket	69820126
Shandon Citadel Service Manual	69810095
Shandon Vacuum Unit Operator Manual (Specify Language)	69810140
Shandon Citadel Gold Service Plan (see page 16)	6983106
Shandon Pathcentre Bronze Service Plan (see page 16)	6983106PM

## Agency Approvals

Designed to meet IEC 61010, UL, and CE Mark (IVDD compliant).

# Shandon Netmon™ Service

Remote monitoring system for peace of mind all of the time.

## Shandon Excelsior™ Netmon

A service that directly connects the Shandon Excelsior in the customer's laboratory to the Thermo Electron Service Support Center in Pittsburgh, U.S.A., and Runcorn, U.K. By using a dedicated telephone line at the customer site, high-value support services are made available to the user in a real-time manner.

## Customized Monthly Report provides the following information:

Four fundamental system tests:

- Fluid transfer check
- Peak fluid temperatures
- Alcohol quality measurement
- Error checks

The signature of the the service support engineer is included with the report.



## The Shandon Excelsior Netmon service includes:

- Monthly preventive maintenance review.
- Monthly monitoring report for inclusion in the customer's Quality Management system.
- Rapid on-line diagnosis and resolution of system problems.
- Escalation to service call, if required, with dispatch of needed spare parts.
- On-line technical support to resolve operational issues.

Netmon™

TEST 4

ERROR CHECKS

Netmon records all instrument warnings and faults. These are reviewed and any further ac is initiated.

11/10/03 Failure to pressurize reaction chamber (Fault 28 Air leak test)

Comment: On-line diagnostics will be performed and need for service visit evaluated.

Report Prepared By:

800-245-6212

Netmon™

TEST 3

ALCOHOL QUALITY MEASUREMENT

This check provides a record of AI alcohol quality, measured as specific gravity (SG), for each processing run in the previous six weeks. This provides a verification of the function of the SG measurement system.

Date	Time	SG (AI) g/cc, Cm	% Alcohol
11/09/03	19:30	830	65
11/10/03	18:45	842	61
11/11/03	18:50	857	58
11/12/03	19:40	869	54

Netmon™

TEST 2

PEAK FLUID TEMPERATURES

This test records the highest temperatures reached in each of the wax baths and reaction chamber. These checks verify that the system is operating to specification and can also provide preventive maintenance information.

Reaction Chamber	Setting	Limit	Peak temperature
Wax 1	60	64	70
	60	64	61
Wax 2	60	64	61
Wax 3	60	64	61

Comment: Peak temperatures in reaction chamber occurred on Nov. 7, fault cleared by us

Netmon™

Netmon: A technical support service provided by Thermo Electron that allows monthly monitoring of you Excelsior tissue processor and provides a status report of four critical systems tests. The report also indicates any actions required and can be used as an integral part of your laboratory's Quality Management System.

TEST 1

FLUID TRANSFER CHECK

This test checks critical components of the fluid transfer system, including rotary valve positioning, pneumatic seals, vacuum pump, and level sensors. The report identifies any reduction in system performance for all fluid transfer activities involving the twenty port positions.

Date Loaded	Uses	Date Rotated	Uses	Position	OK	Restricted	Underfill
				Fix1	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
				Fix2	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
				EX1	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
06/15/03	45	10/15/03	8	A1	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

## Shandon Excelsior™ Netmon at Home\*



The Shandon Excelsior Netmon at Home is your way of always staying connected to your tissue processor. Shandon Excelsior Netmon at Home service allows you to dial into and control your Shandon Excelsior from the comfort of your home. If you need to check the status or respond to any error messages, you simply dial in and fix the problem without going to the lab. The Shandon Excelsior Netmon at Home is available only to Shandon Netmon customers.

## Dialing into the Shandon Excelsior using Shandon Excelsior Netmon at Home provides access to the following information:

- Status
- Progress through a processing run
- Alcohol quality measurement
- Error checks.
- Other features are available; consult your representative for details.

Description	Order Number
Shandon Excelsior Netmon at Home Kit	A78410072
CD + Manual	

**Please contact your local Sales Representative for information about other Shandon Netmon capabilities and complete ordering information.**

**\*Netmon is only available in the United States and United Kingdom .**

# Shandon TissueWave™

Microwave specimen processing and staining system.



The Shandon TissueWave Specimen Processing System is used for tissue fixation and processing, decalcification of hard material, routine special stains where heat would accelerate the staining process, and for epitope enhancement during immunohistochemical staining. It is designed for greater flexibility to meet the growing workload demands. This user friendly instrument will free up technical time for more complex procedures. The Shandon TissueWave will consistently deliver uniformly excellent results in a fraction of the time.

Laboratory safety is always an important consideration when purchasing equipment. The Shandon TissueWave has a ventilation system interlock that prevents the unit from operating if there is not adequate air flow established through the microwave chamber. This prevents the unrealized possibility of dangerous and toxic fumes from accumulating.

Control of the Shandon TissueWave is monitored by two separate parameters; either by temperature or total power control. Temperature may be further defined by measuring total time (including the ramp time to achieve the correct temperature) or by the time at temperature for a particular 'Preset'.

- Sleek, modern design.
- Ventilation system to remove dangerous and toxic fumes.
- Programmable, 40 'Preset' steps that mat be used to create processing and staining programs.
- Vacuum chamber for rapid fixation and paraffin infiltration.
- Temperature and power controls, ability to convert wattage protocols.
- The most accurate temperature control of any pulsed power microwave.
- One cycle/one second pulsing power mode.
- Easy to use display screen and control panel for easy programming.
- Handles RUSH specimens effectively.
- Frees up technical time for more complex procedures.
- Provides processing and warning messages throughout use.
- Temperature probe that guarantees accurate temperature control to  $\pm 1^{\circ}\text{C}$ .
- Compatible with Shandon Excelsior™ ES Processor organized baskets.



**Shandon TissueWave vacuum chamber.**  
A custom designed vacuum chamber is an added accessory that comes with the Shandon TissueWave. This unique chamber allows for more rapid microwave fixation and consistent paraffin wax infiltration. A wax accumulator is attached to the rear of the unit to prevent wax from entering the vacuum pump. The Shandon Excelsior ES Tissue Processor baskets may be used in conjunction with the Shandon TissueWave Microwave Processor to meet all tissue processing needs.



Shandon Excelsior™ ES organized basket.

**Shandon TissueWave LCD display.**  
The Shandon TissueWave has an interactive LCD display screen that directs and instructs the user throughout the operation of the unit. The keypad control panel is easy to use. Universal symbols are used for multiple languages. The system allows for 40 'Preset' steps for multiple processing and staining procedures. These 'Preset' steps are user defined and can be run on demand or strung together to create a program. Air agitation, internal light switch, and vacuum may be defined within a 'Preset' or controlled independently from the control panel.



## Shandon TissueWave™ Specifications

Description	Order Number	
Shandon TissueWave	110-120V, 60Hz	B35200002
	220-240V, 50/60 Hz	B35200001

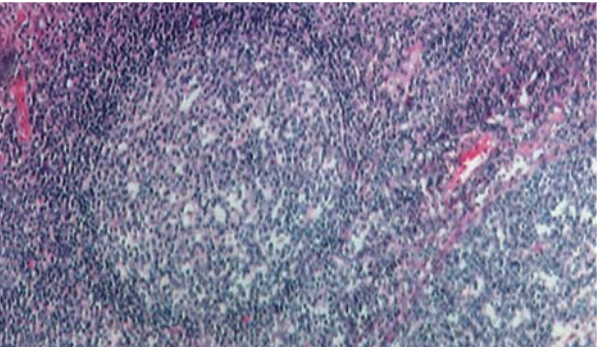
<b>Specifications</b>	
<b>Dimensions (H x W x D)</b>	
19" x 21.5" x 24.5" (48.2 x 54.6 x 62.2 cm)	
<b>Chamber Dimensions</b>	
9.5" x 13.5" x 15.5" (24.1 x 34.3 x 39.4 cm)	
<b>Weight</b>	
77 lbs. (169.4 kg)	
<b>Power Requirements</b>	
120V system - 15 amp service minimum (20 amp recommended)	
230V system - 10 amp service minimum (15 amp recommended)	

Included with Product*	Order Number
Air agitator tubing, glass, 3 / Pk.	B35240039
Shandon Excelsior ES organizer basket - 2 supplied	See Below
Air Adjustment screw	B35240005
Fuse, 15A	B35240014
AC Input Fuse Holder	B35240013
Interior Lamp	B35240015
Microwavable Specimen Containers, 2.6 Qt. / 2.5 L	B35210007
Operator's Guide	B35210021
Temperature Probe	B35240051
Vacuum Chamber, glass	B35210001

\* Contents, Packaging, and Quantities of items listed under "Included with Product" are subject to change without prior notice.

Available Accessories	Order Number
Shandon Excelsior ES Organized Baskets - 6 supplied	A78410025
Microwavable Plastic Coplin Staining Jar	194
Microwavable Plastic Spill free slide Jar - Each	1001362
- 12 / Pk.	1001363
- 48 / Cs.	1001361
Plastic Staining Dish and Cover	195
Plastic Staining Rack-25 slide capacity	196
Microwave Detector, hand held model	B35240070
Shandon TissueWave Gold Service Plan (see page 16)	B35200002C

<b>Agency Approvals</b>
Designed to meet IEC 61010, CSA, UL, and CE Mark.



Results shown using the Shandon TissueWave with Shandon Zinc Formal Fixx™ (see page 12).



# Processing Reagents

Made to bring out the best in your Shandon equipment.

## Shandon Xylene



- Clearing agent for processing, staining and coverslipping.
- A filtered, quality reagent.
- Color-coded bottle for Shandon Excelsior™.

Description	Pkg/Qty	Order Number
Shandon Xylene	4 L x 1*	9990501
Shandon Xylene	10 L x 2	9990502
Shandon Xylene	209 L (55 gal.)	9990503

## Shandon Xylene Substitute



- A safer, more convenient alternative to xylene for processing, staining and coverslipping.
- Airborne exposure limit three times safer than xylene (TLV 300 ppm).
- Virtually odorless aliphatic hydrocarbon – no citrus aroma.
- Not sensitizing to normal skin.
- Evaporation rate similar to xylene – slides dry quickly.
- Greaseless.
- Can be recycled with solvent recyclers.
- Color-coded bottle for Shandon Excelsior.

Description	Pkg/Qty	Order Number
Shandon Xylene Substitute	4 L x 1*	9990505
Shandon Xylene Substitute	4 L x 4	6764506
Shandon Xylene Substitute	10 L x 2	6764508
Shandon Xylene Substitute	19 L	9990507
Shandon Xylene Substitute	209 L (55 Gal.)	9990509

\*Ready-to-use, color-coded Shandon Excelsior™ packaging.

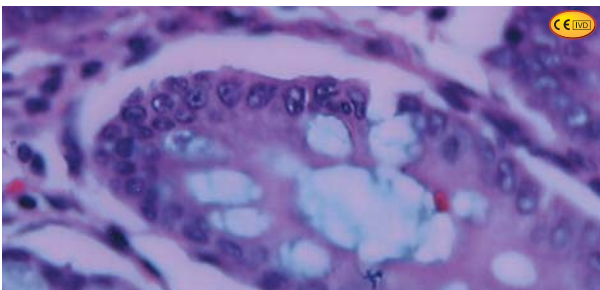
## Shandon Reagent Alcohol



- Blend of 90%-absolute ethanol; 5%-methanol; 5%-isopropanol.
- A filtered, quality reagent.
- Use in place of absolute (100%) ethanol for most pathology procedures, including staining sequences.
- No license required by Bureau of ATF.
- Color-coded bottle for Shandon Excelsior.

Description	Pkg/Qty	Order Number
Shandon Reagent Alcohol	4 L x 1*	9990520
Shandon Reagent Alcohol	209 L (55 gal.)	B9990521

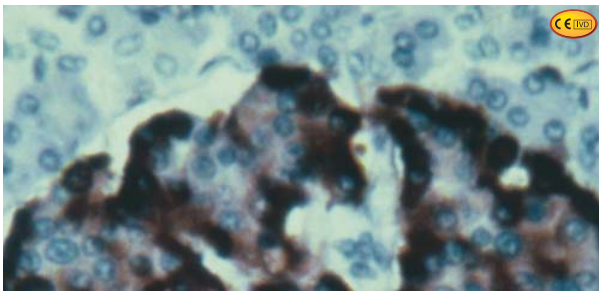
## Shandon Formal-Fixx™ 10% Neutral Buffered Formalin



- Phosphate-free, 10% neutral buffered formalin produces consistent results, and extends life of rotary valve in tissue processors.
- Store all specimens without excessive shrinking or hardening.
- Use for storage of all tissue – eliminates presorting of EM specimens.
- Available premixed ready-to-use or in economical concentrate – just add water or alcohol.
- Concentrate is not affected by freezing, reduces shelf space and is less expensive to ship.
- Pre-filled, leak resistant cups are available.
- Cups are packed in sturdy trays for courier transport.

Description	Pkg/Qty	Order Number
Shandon Formal-Fixx	19 L x 1	6764240
Ready-To-use	10 L x 2	9990234
Shandon Formal-Fixx	20 ml Cups, filled To 10 ml, 180 / Cs.	9990910
Pre-filled Cups	60 ml Cups, filled To 30 ml, 125 / Cs.	9990914
	90 ml Cups, filled To 45 ml, 125 / Cs.	9990916
	120 ml Cups, filled To 60 ml, 125 / Cs.	9990918
Shandon Formal-Fixx	3.8 L x 1 (makes 19L)	6764254
Concentrate (5x)	1L x 2* (makes 5L)	9990244

## Shandon Glyo-Fixx™



- Glyo-Fixx is a non-carcinogenic, non-sensitizing and environmentally friendly substitute for formalin.
- The active ingredient, glyoxal, is a di-aldehyde which has almost no vapor.
- Convenient-used with the same protocols as formalin.
- Glyo-Fixx does not have the unpleasant odor of formaldehyde.
- Results are superior to neutral buffered formalin, producing distinct and crisp cellular morphology.
- Does not cross-link as formaldehyde does. It fixes most antigens without impairing their immunoreactivity.
- With Glyo-Fixx, higher antibody dilutions can be used.
- Works well with conventional special stains including silver procedures, Schmorl's for reducing substances, PAS, Alcian blue, mucicarmine, Verheoff-Van Gieson for elastin, and trichrome.
- Allows special stain dyes to be sharp without background staining. It also presents fine detail in specimen structure.

Description	Pkg/Qty	Order Number
Shandon Glyo-Fixx	3.8 L x 1	6764262
Ready-to-use	19 L x 1	6764260
Shandon Glyo-Fixx	20 ml Cups, filled To 10 ml, 180 / Cs.	9990920
Pre-filled Cups	60 ml Cups, filled To 30 ml, 125 / Cs.	9990924
	120 ml Cups, filled To 60 ml, 125 / Cs.	9990928
Shandon Glyo-Fixx	3.8 L x 1 (makes 19L); Concentrate (5x)	6764265

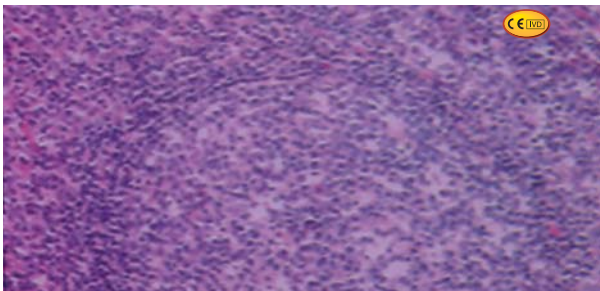
## Shandon Rapid-Fixx™ Formalin



- Used in Rapid-Chrome™ Frozen Section Stain Kit (9990001) for fixing slides from frozen sections.
- Excellent for antigenic preservation, avoids the need for enzyme digestion, and rapidly penetrates into tissue.

Description	Pkg/Qty	Order Number
Shandon Rapid-Fixx	1 L x 2	6764212

## Shandon Zinc Formal-Fixx™



- Excellent for immunochemistry.
- The fixative of choice to enhance H&E's and special stains.
- Minimizes the need to enzyme digest; reduces protein cross-linking, producing well defined nuclear detail.

Description	Pkg/Qty	Order Number
Shandon Zinc Formal Fixx	19 L x 1	6764250
Ready-to-use	10 L x 2	9990235
Shandon Zinc Formal Fixx	3.8 L x 1 (makes 19 L)	6764255
Concentrate (5x)	1 L x 2	9990245
Wrench for 19 L Carboy		B1000722

## Shandon TBD-1™ Decalcifier



- Rapid hydrochloric acid decalcifier for processing bone marrow biopsies in as little as 15-30 minutes.
- Thin pieces of dense bone process in 3-12 hours.
- Permits utilization of routine end point tests, such as calcium oxalate.
- Added ingredients protect cells from actions of acids.

Description	Pkg/Qty	Order Number
Shandon TBD-1	1 L x 2	6764001
Shandon TBD-1	1 L x 4	6764002

## Shandon TBD-2™ Decalcifier



- Formic acid decalcifier for gentle, longer term processing.
- Go up to 48 hours past end point without damaging specimens.
- Permits utilization of routine end point tests, such as calcium oxalate.
- Added ingredients protect cells from actions of acids.

Description	Pkg/Qty	Order Number
Shandon TBD-2	1 L x 2	6764003
Shandon TBD-2	1 L x 4	6764004

# Cassettes and Capsules

Autopsy and tissue processing cassettes.

## Shandon Autopsy Cassette



- Designed for handling tissue through fixation, dehydration, clearing and infiltration processes.
- Polished stainless steel top and bottom are perforated to promote reagent circulation.
- Four-partition stainless steel separator is easily removed (sold separately).
- 3" Diameter x 0.5" Depth (76 x 13 mm).

Description	Pkg/Qty	Order Number
Shandon Autopsy Cassette	Each	333
Separator	Each	33319

## Shandon Autopsy Tissue Capsules



- Perforated throughout for free movement of fluids.
- Snap cap provides positive enclosure.
- Stainless steel.
- 1.38" (35 mm) Diameter. Available in sizes of 1.2" (30 mm) or 2.76" (70 mm) deep.

Description	Pkg/Qty	Order Number
Shandon Autopsy Tissue Capsules, 70 mm	Each	332
Shandon Autopsy Tissue Capsules, 30 mm	Each	342

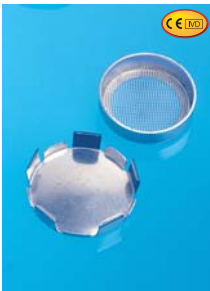
## Shandon Tissue Processing Capsule



- Five sturdy lugs grasp the base securely.
- Stainless steel capsule can be partitioned up to 4 sections.
- Partition separators sold separately.
- 1.46" Diameter x 0.24" Depth (37 x 6 mm).

Description	Pkg/Qty	Order Number
Shandon Tissue Processing Capsule	Each	330
Separators, S-shaped	Each	33019
Separators, Z-shaped (not shown)	Each	33020

## Shandon General Purpose Capsule



- General purpose capsule for routine or small specimens.
- Precise enclosure.
- Extra fine bottom mesh.
- Stainless steel.
- 0.98" Diameter x 0.24" Depth (25 x 6 mm).

Description	Pkg/Qty	Order Number
Shandon General Purpose Capsule	Each	350

## Shandon Standard Cassette



- Stainless steel.
- 1.58" Diameter x 0.276" Depth (40 x 7 mm).
- Expandable to 0.43" (11 mm) depth.

Description	Pkg/Qty	Order Number
Shandon Standard Cassette	Each	339

## Shandon Micro-Cassette



- Positive clip-on cover for micro specimen.
- All stainless steel.
- Available with fine or coarse mesh.
- 0.79" Diameter x 0.197" Depth (20 x 5 mm).

Description	Pkg/Qty	Order Number
Shandon Micro-Cassette, Coarse Mesh	Each	331
Shandon Micro-Cassette, Fine Mesh	Each	33124

## Shandon Large Cassette



- Flexible snap cover easily attached and removed.
- Stainless steel.
- 1.97" L x 0.98" W X 0.47" D (50 mm x 25 mm x 12 mm).

Description	Pkg/Qty	Order Number
Shandon Large Cassette	Each	349

# Paraffin

Quality paraffins for every needs.



Thermo-brand paraffins are quality blends of paraffin, polymers, and plastics (to varying degrees, based upon type) that not only achieve thorough tissue infiltration, but also provide maximum support during microtomy.

	Paraplast®	Paraplast Plus®	Paraplast X-tra®	Shandon Precision Cut	Shandon Histoplast
Form	Pellet	Pellet	Pellet	Pellet	Pellet
Additives	Plastic	DMSO	Microcrystalline Wax	Purified Paraffin with Polymers	Contains No Plastic Polymers
Special Use	General Purpose	Enhanced Infiltration & Sectioning	Thin Sectioning	Low polymer content for improved infiltration, Embedding. Good ribbon capability with longer blade life.	General Purpose
Melting Point	56°-57°C	56°C	50°-54°C	52°-54°C 56°-58°C 62°-64°C	56-57°C
Packaging	2.2 lbs. / Bag x 8 (1 kg x 8)	2.2 lbs. / Bag x 8 (1 kg x 8)	2.2 lbs. / Bag x 8 (1 kg x 8)	5.5 lbs. / Bag x 4 (2.5 kg x 4)	22 lbs. / Bag (10 kg) 5.5 lbs. / Box (2.5 kg)
Order No.	501006 CE IVD	502004 CE IVD	503002 CE IVD	B24209 B1002490 B24210	6774060 6774006 CE IVD



### Shandon Biopsy Cassettes I

Qty: 500/Box  
Pore Style: Small, Square  
Attached break-away lids.

Color	Order No.
White	1000968
Pink	1001090
Green	1000969
Yellow	1000970
Blue	1001091
Gray	1000971
Orange	1001095
Peach	1001092
Tan	1001093
Lilac	1001094
Aqua	1001096
Dark Green	N/A
Dark Red	N/A
Dark Blue	N/A



### Shandon Biopsy Cassettes II

Qty: 500/Box  
Pore Style: Small, Square  
Locking lid attached by two hinges.

Color	Order No.
White	1001097
Pink	1001098
Green	1001099
Yellow	1001100
Blue	1001101
Gray	1001104
Orange	1001106
Peach	1001102
Tan	1001103
Lilac	1001105
Aqua	1001107
Dark Green	N/A
Dark Red	N/A
Dark Blue	N/A



### Shandon Tissue Cassettes II

Qty: 500/Box  
Pore Style: Slotted  
Locking lid attached by two hinges. May be opened from front or back.

Color	Order No.
White	1001061
Pink	1001060
Green	1001059
Yellow	1001058
Blue	1001057
Gray	1001054
Orange	1001052
Peach	1001056
Tan	1001055
Lilac	1001053
Aqua	1001051
Dark Green	N/A
Dark Red	N/A
Dark Blue	N/A



### Shandon Microsette® Biopsy Cassettes

Qty: 1000/Case (4 x 250 per box)  
Pore Style: Small holes of 0.36 mm diameter  
Large compartment measuring 25 x 30 mm for maximum fluid exchange.

Color	Order No.
White	B1000733VH
Pink	B1000733PK
Green	B1000733GR
Yellow	B1000733YV
Blue	B1000733BL
Gray	B1000733GY
Orange	B1000733OR
Peach	B1000733PE
Tan	B1000733TN
Lilac	B1000733LI
Aqua	B1000733AQ
Dark Green	B1000733DGR
Dark Red	N/A
Dark Blue	N/A



### Shandon Micromesh™ Biopsy Cassettes\*

Qty: 1000/Case (4 x 250 per box)  
Pore Style: Square 0.38 mm diameter  
Compartment measuring 24 x 27 mm

Color	Order No.
White	B1000735VH
Pink	B1000735PK
Green	B1000735GR
Yellow	B1000735YV
Blue	B1000735BL
Gray	B1000735GY
Orange	B1000735OR
Peach	B1000735PE
Tan	B1000735TN
Lilac	B1000735LI
Aqua	B1000735AQ

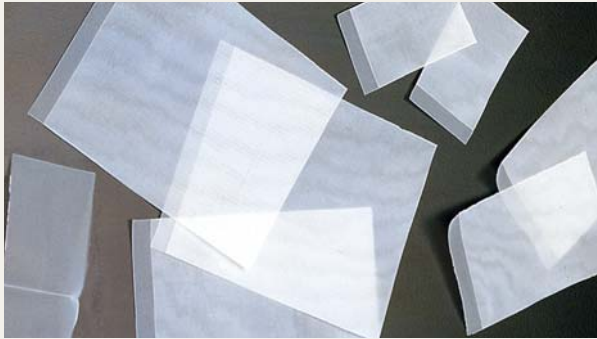
\*May be labeled on the Shandon MicroWriter™ Series Labelers with the lids on.



# Technical Services

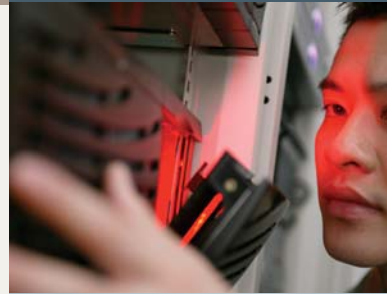
Rest easy with Thermo Fisher Scientific Service.

## Shandon Biopsy Bags



- Allow unrestricted fluid movement around tissue.
- Reduce risk of small specimen loss.
- Reduce reagent carry-over and pressure artifact often found with sponges.
- Peel-open bag conveniently exposes specimen for rapid removal.
- Acid Resistant Biopsy Bags feature all the benefits of nylon biopsy bags, plus offer acid-resistance for decalcification.
- **Small Biopsy Bags** measure 1.2" x 1.7" (31 x 43 mm)
- **Medium Biopsy Bags** measure 1.8" x 2.6" (45 x 65 mm)
- **Large Biopsy Bags** measure 3" x 3.5" (75 x 85 mm)

Description	Pkg/Qty	Order Number
<b>Shandon Nylon Biopsy Bags, Small</b>	200 / Pk.	6774014
<b>Shandon Nylon Biopsy Bags, Small</b>	500 / Pk.	6774015
<b>Shandon Nylon Biopsy Bags, Small</b>	1,000 / Pk.	6774010
<b>Shandon Nylon Biopsy Bags, Medium</b>	200 / Pk.	6774012
<b>Shandon Nylon Biopsy Bags, Medium</b>	500 / Pk.	6774013
<b>Shandon Nylon Biopsy Bags, Medium</b>	1,000 / Pk.	6774009
<b>Shandon Nylon Biopsy Bags, Large</b>	500 / Pk.	6774011
<b>Shandon Acid-Resistant Biopsy Bags, Small</b>	250 / Pk.	6774051
<b>Shandon Acid-Resistant Biopsy Bags, Medium</b>	250 / Pk.	6774050
<b>Shandon Acid-Resistant Biopsy Bags, Large</b>	250 / Pk.	6774052



**Downtime  
equals  
wasted  
time.**

At Thermo Fisher Scientific Anatomical Pathology we understand the importance of maintaining an efficient laboratory and happy technicians. No matter what your service requirements are, Thermo Fisher has a solution that can keep you working at peak efficiency.

- **Flexible programs to meet your workflow and laboratory needs.**
- **Our factory-trained technicians are conveniently located throughout the country and have years of experience servicing our equipment.**
- **Only original factory parts are used for repair and maintenance.**
- **We provide 24/7/365 phone support (U.S. only).**
- **Technical hotline service available.**

All equipment is provided with a one year parts and labor manufacturer's warranty. Additional programs can be purchased at the time of purchase of the instrument or prior to the expiration of the Bronze plan.

### Our Platinum Plan\* (One year term)

- Covers replacement parts necessary for repairs
- Covers cost of repair and travel labor
- Repairs performed either on-site or at Thermo Fisher Scientific
- Includes one annual preventative maintenance (PM)
- If requested, loaner instrumentation will be provided at no charge if the instrument cannot be repaired within five days of notification
- All shipping charges are covered for the instrument when applicable
- Guaranteed response time of 24 hour on repairs (weekdays)

### Our Gold Plan\* (One year term)

- Covers replacement parts necessary for repairs
- Covers cost of repair and travel labor
- Repairs performed either on-site or at Thermo Fisher Scientific
- Includes one annual preventative maintenance (PM)
- If requested, loaner instrumentation will be provided at no charge if the instrument cannot be repaired within five days of notification
- All shipping charges are covered for the instrument when applicable

### Our Silver Plan\* (One year term)

- Covers replacement parts necessary for repairs
- Covers cost of repair and travel labor
- Repairs performed either on-site or at Thermo Fisher Scientific
- All shipping charges are covered for the instrument when applicable
- Includes one annual preventative maintenance (PM)

\* Produce Support Agreements vary in different countries.

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